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REMARKS

The above-identified application has been carefully reviewed in light of the Examiner's communication mailed July 23, 2003, which included a final rejection of claims 1 to 16, 18 to 23, 26 to 33 and 35 to 58. Applicant submits that the amendments and remarks presented herein show the present claims to be allowable or, if necessary, in better form for appeal. Therefore, applicant respectfully requests that this RESPONSE B be entered and considered on its merits.

Applicant acknowledges the Examiner's action withdrawing the previous rejections under 35 U.S.C. 112 second paragraph, 102 and 103.

Claim 1 has been amended to make clear that the at least one fuel-permeable element comprises at least two different types of components, the types of components being selected from (1) a porous member; (2) a semi-permeable member; and (3) an at least partially fuel-soluble seal. Claim 55 has been amended in a similar manner. Independent claim 52 has been amended to make clear that each of the fuel-permeable elements is provided at or substantially directly adjacent a different one of the at least two openings of the casing. Such amendments are fully supported by the specification and the context of the specification and drawings, and are provided to make the claims read more clearly.

Claims 38 to 40, 48 to 51 and 57 have been canceled, without prejudice, in order to facilitate the prosecution of the above-identified application. Applicant expressly reserves the right to seek patent protection for these or similar claims in one or more later filed related applications.

Claims 1 to 16, 18 to 23, 26 to 33, 35 to 51, 56 and 57 have been rejected under 35 U.S.C. 102(a) as being anticipated by Martin. Claims 52 to 55 and 58 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Martin.

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Applicant traverses each of these rejections as it pertains to the present claims 1 to 16, 18 to 23, 26 to 33, 35 to 37, 41 to 47, 52 to 56 and 58.

Independent claims 1, 41 and 52 are directed to containers for releasing a chemical additive into a liquid fuel and comprise a casing, a fuel additive composition, and at least one fuel-permeable element. Claims 26 to 31 are directed to methods for releasing a chemical additive into a fuel composition using certain of such containers.

The casing defines a fuel-impermeable wall structure, a substantially hollow interior and at least one opening, or at least two spaced apart openings (claim 52), in the wall structure of the casing. The coolant additive composition is provided in the interior of the casing and comprises a chemical additive soluble in the liquid fuel composition.

The fuel-permeable element or elements are provided at or substantially directly adjacent the at least one opening in the casing. In claim 52, each of the fuel-permeable elements is provided at or substantially directly adjacent a different one of the at least two openings in the casing. Each of the fuel-permeable elements is structured to be effective to provide for release of the chemical additive into the liquid fuel composition in contact with the casing.

The present containers provide for effective release, preferably sustained release, of chemical additive into a fuel composition. The positioning of the fuel-permeable element or elements at or substantially directly adjacent the opening or openings in the casing provide for such additive release in a space-effective or space-saving manner. Thus, the size of the present containers can be advantageously reduced relative to conventional fuel additive replacement systems.

In claim 1, the at least one fuel-permeable element comprises

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at least two different types of components. The different types of components are selected from a porous member, a semi-permeable member, and an at least partially fuel-soluble seal. Each of the components of the at least one fuel-permeable element initially extends substantially across the at least one opening, for example, prior to and/or when the container is placed into use.

The inclusion of a fuel-permeable element including at least two different types of components selected from a porous member, a semi-permeable member, and an at least partially fuel-soluble seal, as recited in claim 1, provides containers with substantial performance flexibility and effectiveness advantages. For example, using both a porous member and a semi-permeable member provides for additive release, for example, by diffusion, through pores (porous members) and through materials with no or very small pores (semi-permeable member). See pages 13 and 14 of the present specification. The additive release characteristics of the present containers can be very effectively controlled using both porous members and semi-permeable members. Moreover, the presence of an at least partially fuel-soluble seal, together with the porous member and/or the semi-permeable member, protects the chemical additive during shipment and storage of the container. In addition, such seal can advantageously be used to delay the initial release of the additive into the fuel, if desired, thereby further controlling the release of the additive into the fuel.

In short, the positioning and make-up of the multi-different type of component fuel-permeable elements of the present containers, as recited in independent claim 1, provide substantial and commercially important advantages.

In independent claim 41, the container includes an at least partially fuel-soluble seal positioned so that the seal initially extends substantially across the at least one opening in the casing. Such seal, together with the positioning of the fuel-

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permeable element or elements at or substantially directly adjacent the opening or openings in the casing provide the containers in accordance with claim 41 with many of the same substantial and commercially important advantages discussed above with regard to the containers of claim 1.

In independent claim 52, the container is provided with at least two spaced apart openings in the casing. A different fuel permeable element is positioned at or substantially directly adjacent each of these spaced apart openings. The at least two openings in the casings of the containers in accordance with present claim 52 advantageously provide an additional degree of control or additional flexibility in releasing additive into a fuel composition. Such added control/flexibility, together with the positioning of the different fuel-permeable elements at or substantially directly adjacent each of the openings in the casing, provide the containers of claim 52 with substantial and commercially important advantages.

In independent claim 32, seal assemblies are provided which can be used in the present containers as the at least partially fuel-soluble seals to provide or facilitate one or more of the advantages of such containers, as set forth above. For example, the fuel-permeable membranes recited in independent claim 32 are sized and structured to be positioned in or substantially directly adjacent an opening of a casing. As discussed above, this feature is advantageous, for example, in reducing the size of the containers used to release fuel additives into fuel compositions. In addition, the at least partially fuel-soluble seal member is sized and structured to be positioned relative to the opening in the casing to prevent additive leaving the hollow interior through the opening when the seal member is intact. Such seal member may advantageously protect the additive composition in the casing and/or delay initial release of the additive, as discussed

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hereinabove.

The Examiner cites Martin as disclosing a fuel filter for filtering fuel and adapted to release a fuel additive into the fuel at a controlled rate having a fuel filter assembly comprising a chamber including an inlet and an outlet for fuel, a filter element disposed within the chamber and positioned between the inlet and outlet for fuel, a source of fuel additive disposed in the chamber, a semi-permeable membrane orifice positioned between the source of fuel additive and the fuel outlet and a cap including a plate for retaining the orifice in place. The Examiner states that the container with the additive contacts a fuel for slow release of the additive anticipating the present claims.

Martin does not specifically disclose, teach or suggest the present invention. For example, Martin does not specifically disclose, teach or even suggest a container for releasing a chemical additive into a fuel composition including at least one fuel-permeable element provided at or substantially directly adjacent an opening in a casing, as recited in independent claims 1, 41 and 52, or methods of using such containers, as recited in claims 26 to 31. Applicant notes that, in accordance with the Examiner's interpretation of Martin, a substantial space exists between the outlet aperture of the filter housing (the opening in the casing according to the Examiner) and the filter element of Martin. Also a substantial space exists between the outlet aperture of the filter housing and the baffle plates 50 or the osmotic wafer 248 disclosed by Martin.

The fact that each of the filter member, baffle plates and osmotic wafer is spaced apart from the outlet aperture of the filter housing of Martin makes clear that Martin does not specifically disclose or suggest, and actually teaches away from, the positioning of the present fuel-permeable elements of the present containers, as recited in the present claims. In effect,

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the "spaced apart" design of the Martin system is in direct contrast to the positioning of the at least one fuel-permeable element of the present containers, which is located at or substantially directly adjacent an opening in the casing, as recited in the present claims 1, 41 and 52. As noted above, such positioning of the at least one fuel-permeable element in accordance with the present invention provides substantial and commercially important advantages for the present containers.

Moreover, Martin teaches using either baffle plates or an osmotic wafer to provide a slow release mechanism. Thus, Martin actually teaches away from those embodiments of the present containers which employ multi-different type of component fuel-permeable elements, as recited in claims 1 and 55.

In addition, Martin does not specifically disclose, teach or suggest a fuel-permeable element which comprises an at least partially fuel-soluble seal located at or substantially directly adjacent the outlet aperture of the filter housing of Martin. Still further, Martin does not specifically disclose, teach or suggest a seal assembly comprising a fuel permeable membrane sized and structured to be positioned in or substantially directly adjacent an opening of a casing containing a fuel additive and an at least partially fuel-soluble seal member sized and structured to be positioned relative to the opening in the casing to prevent additive leaving the hollow interior of the casing through the opening when the seal member is intact, as recited in claim 32.

In view of the above, applicant submits that the present claims, and in particular claims 1 to 16, 18 to 23, 26 to 33, 35 to 37, 42 to 47, 56 and 57 are not anticipated and are unobvious from and patentable over Martin under 35 U.S.C. 102(a) and 103(a).

With regard to claims 52 to 55 and 58, the Examiner contends that Martin clearly contemplates more than one opening in the chamber, thus rendering obvious the further teachings of at least

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two openings in claims 52 to 55 and 58.

However, Martin does not specifically disclose, teach or suggest the invention set forth in claims 52 to 55 and 58. For example, Martin does not specifically disclose, teach or even suggest a container for releasing a chemical additive into a fuel composition comprising a casing having at least two spaced apart openings, a fuel additive composition located in the interior of the casing and a plurality of fuel-permeable elements, with each of the fuel-permeable elements being provided at or substantially directly adjacent a different one of the at least two openings in the casing, as recited in claims 52 to 55 and 58. In other words, although Martin may suggest that more than one opening may be provided to allow migration of fuel into the chamber, Martin does not specifically disclose or suggest that each of these openings has a separate fuel-permeable element to provide controlled release of a chemical additive into the fuel composition, as recited in independent claim 52.

In view of the above, applicant submits that the present claims, and in particular claims 52 to 55 and 58, are unobvious from and patentable over Martin (and Martin in view of Martin) under 35 U.S.C. 103(a).

Each of the present dependent claims is separately patentable over the prior art. For example, none of the prior art, taken singly or in any combination, disclose, teach or even suggest the present containers, seal assemblies, and methods including the additional feature or features recited in any of the present dependent claims. Therefore, applicant submits that each of the present claims is separately patentable over the prior art.

In conclusion, applicant has shown that the present claims are not anticipated and are unobvious from and patentable over the prior art under 35 U.S.C. 102 and 103. Therefore, applicant submits that claims 1 to 16, 18 to 23, 26 to 33, 35 to 37, 42 to

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47, 52 to 56 and 58 are allowable and respectfully requests the Examiner to pass the above-identified application to issuance at an early date. Should any matters remain unresolved, the Examiner is requested to call (collect) applicant's attorney at the telephone number given below.

Respectfully submitted,



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